

Claims

1. A sulphided ion exchange resin containing primary or secondary amino groups.
2. A method according to claim 1 wherein the ion exchange resin is in the form of a fixed bed of shaped units having maximum and minimum dimensions in the range 0.5 to 10 mm.
3. A method for the production of a sulphided ion exchange resin according to claim 1 or claim 2 comprising passing a non-aqueous liquid feedstock containing elemental sulphur or organic, or inorganic, di-or poly-sulphides through a bed of an ion exchange resin containing primary or secondary amino groups.
4. A method for the removal of elemental sulphur from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of an ion exchange resin containing primary or secondary amino groups.
5. A method according to claim 4 wherein the feedstock is passed through a bed of a hydrogen sulphide absorbent after passage through the bed of the ion exchange resin.
6. A method according to any one of claims 3 to 5 wherein water is removed from the ion exchange resin before use.
7. A method according to any one of claims 3 to 6 wherein the feedstock is contacted with the ion exchange resin bed at temperatures in the range  $-10^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  under sufficient pressure that the feedstock is in the liquid state.
8. A method according to any one of claims 3 to 7 wherein the ion exchange resin is periodically regenerated by treatment with an acid.

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9. A method according to any one of claims 3 to 8 where the liquid is a hydrocarbon.
10. A method for the removal of mercury and organic mercury compounds from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of a sulphided ion exchange resin containing primary or secondary amino groups according to claim 1 or claim 2 or made by a process according to any one of claims 3 to 9.
11. A method according to claim 10 wherein the feedstock is contacted with the ion exchange resin bed at temperatures in the range  $-10^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  under sufficient pressure that the feedstock is in the liquid state.
12. A method for the removal of elemental sulphur and of mercury and organic mercury compounds from a non-aqueous liquid feedstock comprising passing the feedstock through a bed of an ion exchange resin containing primary or secondary amino groups wherein at least the inlet portion of the bed of ion exchange resin is sulphided before a mercury containing stream is passed through the bed.
13. A method according to any one of claims 10 to 12 wherein the liquid is a hydrocarbon.